Combat Aviation Physics – Spring 2002
Syllabus Overview

Lesson 1: Introduction
Lesson 2: Review of “Four Force Physics”
Lesson 3: Turn Performance
Lesson 4: Energy Maneuvering
Lesson 5: Principles of Basic Fighter Maneuvers (BFM)
Lesson 6: Low Aspect BFM ..... **Problem Set 1 Due**
Lesson 7: Application Exercise 1
Lesson 8: Application Exercise 1 (Continued)
Lesson 9: High Aspect BFM ..... **Application Exercise 1 Due**
Lesson 10: Energy vs. Angles
Lesson 11: Basic Intercepts
Lesson 12: Air-to-Air Tournament
Lesson 13: Air-to-Ground Basics
Lesson 14: Air-to-Ground Error Minimization
Lesson 15: Review..... **Problem Set 2 Due**
Lesson 16: Guest Speaker
Lesson 17: **GR 1**
Lesson 18: GR Debrief
Lesson 19: An Introduction to Electronic Warfare
Lesson 20: Review of Electromagnetism
Lesson 21: Application Exercise 2
Lesson 22: Target Resolution..... **Application Exercise 2 Due**
Lesson 23: Application Exercise 3
Lesson 24: Ranging Schemes..... **Application Exercise 3 Due**
Lesson 25: Ranging and Resolution..... **Problem Set 3 Due**
Lesson 26: The Doppler Effect
Lesson 27: Doppler’s Effect on Spectra
Lesson 28: Application Exercise 4
Lesson 29: Application Exercise 4 Continued
Lesson 30: Doppler Shifts and Range Rate ..... **Application Exercise 4 Due**
Lesson 31: Clutter
Lesson 32: Electronically Steered Arrays
Lesson 33: Application Exercise 5..... **Problem Set 4 Due**
Lesson 34: GR Review ..... **Application Exercise 5 Due**
Lesson 35: **GR 2**
Lesson 36: GR Debrief
Lesson 37: Electronic Support Measures (ESM)
Lesson 38: Electronic Counter- and Counter-Countermeasures (ECM/ECCM)
Lesson 39: Application Exercise 6
Lesson 40: Using the Infrared..... **Application Exercise 6 Due**
Lesson 41: Stealth
Lesson 42: Review..... **Problem Set 5 Due**